

LISTING OF CLAIMS:

Please amend the claims of the application as set forth below.

1. (Currently amended) A method for the reduction or treatment of radiation injury comprising the step of orally administering to a human prior to expected exposure to radiation, during exposure to radiation or after exposure to radiation, a composition which comprises an amount of one or more compounds selected from the group consisting of vitamin D₃, 1(S), 3(R)-dihydroxy-20(R)-(1-ethoxy-5-ethyl-5-hydroxy-2-heptyn-1-yl)-9, 10-seco-pregna-5(Z), 7(E), 10 (19)-triene, cholesterols, 7-dehydrocholesterol, 1, 25-dihydroxyvitamin D₃, and 25-hydroxycholecalciferol, calcitriol, metabolites thereof, and pharmaceutically acceptable salts thereof, which is effective, when administered orally, to inhibit at least one of cell differentiation and cell proliferation, and an effective amount of one or more antioxidants selected from the group consisting of ascorbic acid, dehydroascorbic acid, ascorbic acid esters, Ester-C®, vitamin A, esters of vitamin A, vitamin E, esters of vitamin E, α-lipoic acid, carotenoids, chlorophyllin, coenzyme Q10, glutathione, green tea polyphenols, galangin, rutin, luteolin, morin, fisetin, silymarin, apigenin, gingkolides, hesperitin, cyanidin, citrin, curcuminoid, aldonic acids, aldono-lactones, aldono-lactides, pharmaceutically acceptable salts of each of the foregoing antioxidants, superoxide dismutase catalase, glutathione peroxidase and methionine reductase, and wherein the radiation comprises one or more of proton radiation, fluoroscopic radiation, alpha radiation, beta radiation and gamma radiation.
2. (Previously presented) A method as claimed in claim 1, wherein the compound that inhibits at least one of cell differentiation and cell proliferation is selected from the group consisting of vitamin D₃ and metabolites thereof.
3. (Previously presented) A method as claimed in claim 1, wherein the one or more compounds that inhibit at least one of cell differentiation and cell proliferation are selected from the group consisting of: vitamin D₃, 1, 25-dihydroxyvitamin D₃, 1(S), 3(R)-dihydroxy-20(R)-(1-ethoxy-5-ethyl-5-hydroxy-2-heptyn-1-yl)-9, 10-seco-pregna-5(Z), 7(E), 10 (19)-triene, and pharmaceutically acceptable salts thereof.

4. (Previously presented) A method as claimed in claim 1, wherein the one or more antioxidants are selected from the group consisting of: ascorbyl palmitate, ascorbic acid, vitamin A, vitamin A ester, vitamin E, vitamin E ester, α -lipoic acid carotenoid, chlorophyllin, chlorophyllin salt, coenzyme Q10, glutathione, galangin, rutin, luteolin, morin, fisetin, silymarin, apigenin, gingkolides, hesperitin, cyanidin, citrin, curcuminoid, and pharmaceutically acceptable salts thereof.

5. (Previously presented) A method as claimed in claim 1, wherein the compound that inhibits at least one of cell differentiation and cell proliferation comprises vitamin D₃, and the antioxidant comprises α -lipoic acid and chlorophyllin.

6. (Previously presented) A method as claimed in claim 1 wherein the antioxidant comprises one or more antioxidants selected from the group consisting of superoxide dismutase catalase, glutathione peroxidase and methionine reductase.

7. (Previously presented) A method as claimed in claim 1, wherein the composition further comprises at least one flavonoid or flavonoid derivative selected from the group consisting of: 1,2,3,6-tetra- α -gallyol- β -d-glucose; 2'- α -acetylacetoside; 3,3',4-tri- α -methyl-ellagic acid; 6,3',4'-trihydroxy-5,7,8-trimethoxyflavone; 6-hydroxy-luteolin; 6-hydroxykaempferol-3,6-dimethyl ether; 7- α -acetyl-8-epi-loganic acid; acacetin; acetoside; acetyl trisulfate quercetin; amentoflavone; apigenin; apin; astragalin; avicularin; axillarin; baicalein; brazilin; brevifolin carboxylic acid; caryophyllene; chrysin-5,7-dihydroxyflavone; chrysoeriol; chrysosplenol; chrysosplenoside-a; chrysosplenoside-d; cosmoisin; δ -cadinene; dimethylmussaenoside; diacetylcircimaritin; diosmetin; dosmetin; ellagic acid; ebinin; ethyl brevifolin carboxylate; flavocannibiside; flavosativaside; genistein; gossypetin-8-glucoside; haematoxylin; hesperidine; hispiduloside; hyperin; indole; iridine; isoliquiritigenin; isoliquiritin; isoquercitrin; jionoside; juglanin; kaempferol-3-rhamnoside; kaempferol-3-neohesperidoside; kolaviron; licuraside; linariin; linarin; lonicerin; luteolin; luetolin-7-glucoside; luteolin-7-glucoside; luetolin-7-glucoronide; macrocarpal-a; macrocarpal-b; macrocarpal-d; macrocarpal-g; maniflavone; methy scutellarein; naringenin; naringin; nelumboside; nepetin; nepetrin; nerolidol; oxyayanin-a; pectolinarigenin; pectolinarin; quercetagetrin; quercetin; quercimertrin; quercitrin; quercitryl-2''

acetate; reynoutrin; rhamnetin; rhoifolin; rutin; scutellarein; sideritoflavone; sophoricoside; sorbarin; spiraeoside; trifolin; vitexin; and wogonin..

8. (Canceled)

9. (Original) A method as claimed in claim 7, wherein the flavonoids and flavonoid derivatives are selected from the group consisting of: quercetin, quercetin, myricetin, kaempferol and myrecetin.

10. (Previously presented) A method as claimed in claim 1, wherein the composition further comprises selenium.

11. (Original) A method as claimed in claim 1, wherein the composition further comprises one or more ingredients selected from the group consisting of organic germanium, Korean ginseng, an extract of Korean ginseng, American ginseng, an extract of American ginseng, Siberian ginseng and an extract of Siberian ginseng.

12. (Previously presented) A method as claimed in claim 1, wherein the composition further comprises one or more ingredients selected from the group consisting of B-complex vitamins.

13. (Previously presented) A method as claimed in claim 1, wherein a ratio of the amount of the compound that inhibits at least one of cell differentiation and cell proliferation to the amount of antioxidant is from about 200 IU per gram of antioxidant to about 3 million IU per gram of antioxidant.

14. (Previously presented) A method as claimed in claim 1, wherein a ratio of the amount of the compound that inhibits at least one of cell differentiation and cell proliferation to the amount of antioxidant is from about 1800 IU per gram of antioxidant to about 1 million IU per gram of antioxidant.

15. (Previously presented) A method as claimed in claim 1, wherein a ratio of the amount of the compound that inhibits at least one of cell differentiation and cell proliferation to the amount of antioxidant is from about 5000 IU per gram of antioxidant to about 200,000 IU per gram of antioxidant.
16. (Previously presented) A method as claimed in claim 1 further comprising the step of applying to an area of skin before, during or after exposure to radiation, a topical composition which comprises an amount of one or more compounds that inhibit at least one of cell differentiation and cell proliferation which is effective, when administered topically in the topical composition, to inhibit at least one of cell differentiation and cell proliferation, and an effective amount of one or more antioxidants, formulated in a pharmaceutically acceptable topical carrier for a topical composition.
17. (Previously presented) A method as claimed in claim 16, wherein the pharmaceutically acceptable topical carrier comprises a sufficient amount of at least one hydrophilic ointment base to form a topical composition.
18. (Previously presented) A method as claimed in claim 17, wherein the pharmaceutically acceptable topical carrier further comprises a sufficient amount of a panthenol selected from D-panthenol and DL-panthenol to promote penetration of one or more of the antioxidants and compounds which inhibit at least one of cell differentiation and cell proliferation into the skin.
19. (Original) A method as claimed in claim 16, wherein the pharmaceutically acceptable topical carrier comprises hydroxymethyl cellulose.
20. (Original) A method as claimed in claim 16, wherein the pharmaceutically acceptable topical carrier comprises an acrylic copolymer dissolved in polyethylene glycol.
- 21-37. (Canceled)

38. (Previously presented) A method as claimed in claim 1, wherein the composition comprises vitamin D₃.

39. (Previously presented) A method as claimed in claim 1, wherein the composition comprises chlorophyllin.

40. (Previously presented) A method as claimed in claim 1, wherein the composition comprises α -lipoic acid.

41. (Previously Presented) A method as claimed in claim 40, wherein the composition comprises α -lipoic acid.

42. (Canceled)